

REMARKS

No new matter is believed to be added to the application by this Amendment.

Status of the Claims

Claims 1-17 are pending in the application. Claim 1 has been amended in order to better set forth the invention. Claim 4 has been amended to eliminate multiple dependencies. Support for claims 6-8 can be found at page 8 of the specification. Support for claims 9 and 10 can be found at page 9 of the specification. Support for claims 11-13 can be found at page 10 of the specification. Support for claim 14 can be found at page 11 of the specification. Support for claim 15 can be found at page 12 of the specification. Support for new claim 16 can be found at Table 1 at page 20 of the specification. Claim 17 corresponds to claim 1 and finds further support in Table 1 at page 20 of the specification.

Claim Objections

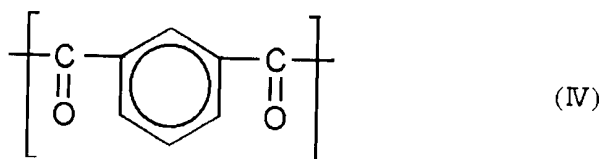
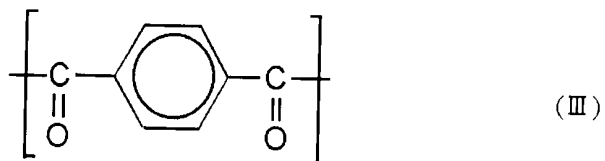
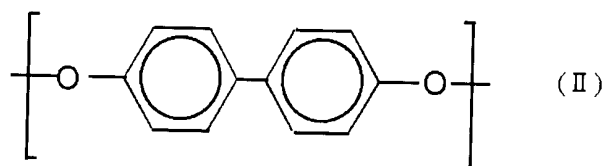
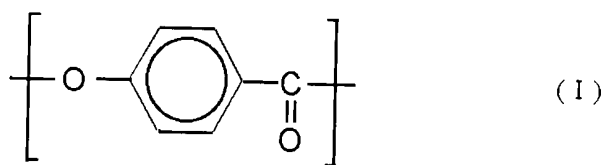
Claim 4 is objected to as being a multiple dependent claim depending upon another multiple dependent claim. Claim 4 as amended is dependent only upon independent claim 1. Accordingly, this objection has been obviated.

Rejection Under 35 U.S.C. 102(b) Over Asai

Claims 1-3 and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Asai (U.S. Patent No. 5,428,100). Applicants traverse.

Present Invention and Its Advantages

The present invention pertains to a liquid crystal polyester resin composition, which contains glass fiber having a number average fiber diameter (after molding) of 2-20 μ m and a number average fiber length (after molding) of 210-500 μ m. The liquid crystal resin composition contains structural units selected from formulas (I), (II), (III) and (IV):



Distinctions of the Invention Over Asai

Asai pertains to liquid crystal polyester resin compositions. Columns 4-6 of Asai show various structural units of the resin. Asai at column 10, lines 6-7 discuss "fibrous or needle-like reinforcing materials such as glass fiber." Asai fails to disclose a liquid crystal polyester resin composition having glass fiber with an average fiber diameter of 2-20 μ m and an average fiber length of 210-500 μ m. See independent claims 1 and 16.

Asai discusses the utilization of fillers in columns 7 and 8. These fillers can be, for example, graphite or talc. Asai at column 7, line 40 states: "Natural scaly graphite is preferable." Asai at column 10, lines 6 and 37 does mention "fibrous or needlelike reinforcing materials...." However, Asai fails to teach the 2-20 μ m average fiber diameter and the 210-500 average fiber length set forth in instant claim 1. Further, the examples in the tables of Asai use natural scaly graphite as a filler.

Further, claim 1 of Asai pertains to a liquid crystal resin composition containing graphite and talc as fillers.

As a result, Asai fails to anticipate the claimed invention, where the composition has glass fiber having a 2-20 μ m diameter and a 210-500 μ m length. Accordingly, this rejection is overcome and withdrawal thereof is respectfully requested.

Rejection Under 35 U.S.C. 102(b) Over Nagano

Claims 1-3 and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Nagano (U.S. Patent No. 5,976,406). Applicants traverse.

Nagano pertains to a liquid crystal polyester composition of functional groups (I) to (IV) having a melt flow temperature of 310-400°C. Nagano uses a fibrous filler and at column 4, lines 12-14 discusses "an average fiber diameter of preferably from 5 to 20 μm , more preferably from 5 to 15 μm ." Nagano at column 4, lines 21-23 states "The average fiber length is preferably from 10 to 300 μm , and more preferably from 50 to 300 μm ."

As discussed at page 3 of the specification, an important object of the invention is to provide a liquid crystal polyester resin composition that has low specific gravity. To achieve this objective, the inventors have found that by using glass fiber having the claimed average fiber diameter and average fiber length, the specific gravity of the polyester resin composition can be reduced while maintaining the desirable properties of bending strength and heat distortion temperature under load. See Table 1 at page 20 of the specification. Although Nagano may discuss average fiber length and average fiber diameter that overlaps the range of the presently claimed invention, Nagano fails to teach or

suggest the effect of using the claimed amount of glass fiber having the specific average fiber diameter and the specific average fiber length. Moreover, Nagano fails to teach or suggest the range of glass fiber as is set forth in the independent claims. Further, Nagano at column 4, line 54 teaches a preferred embodiment of 20-150 parts by weight of inorganic filler. That is, a person having ordinary skill would not be motivated by the teachings of Nagano to reduce the amount of glass fiber in the composition.

As a result, Nagano fails to anticipate the claimed invention. Accordingly, this rejection is overcome and withdrawal thereof is respectfully requested.

Conclusion

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Robert E. Goozner, Ph.D. (Reg. No. 42,593) at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

Attached hereto is a marked-up version of the changes made to the application by this Amendment.

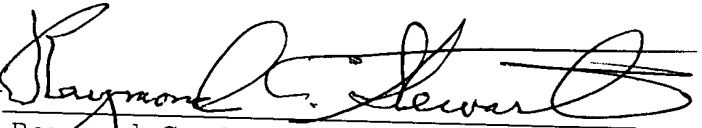
Pursuant to 37 C.F.R. §§ 1.17 and 1.136(a), Applicant(s) respectfully petition(s) for a three (3) month extension of time

for filing a reply in connection with the present application, and the required fee of \$930.00 is attached hereto.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

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Attachment: Version with Markings to Show Changes Made

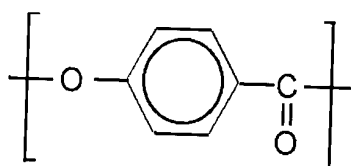
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VERSION WITH MARKINGS TO SHOW CHANGES MADE

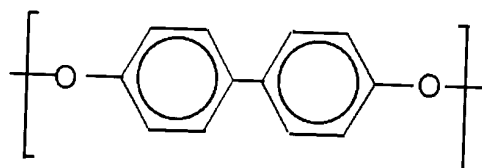
IN THE CLAIMS:

The claims have been amended as follows:

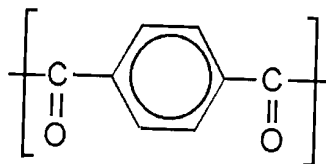
1. (Amended) A liquid crystal polyester resin composition, which comprises [5-20] 5-15 parts by weight of glass fiber having a number average fiber diameter after molding of 2-20 μm , and a number average fiber length after molding of 210-500 μm ; and 100 parts by weight of a liquid crystal polyester resin containing the following structural units (I), (II) and (III), or the following structural units (I), (II), (III) and (IV); and the sum of (I), (II), (III) and (IV) is 95 % by mole or more,



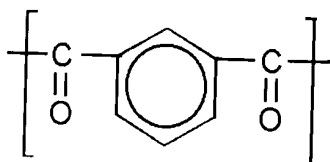
(I)



(II)



(III)



(IV)

and the flexural modulus thereof measured with using a test piece of 0.5mm thickness is 25 GPa or more.

4. (Amended) A molded article obtained by using the liquid crystal polyester resin composition according to [any one of claims 1 to 3.] claim 1.

Claims 6-17 have been added.